



**WASTE MANAGEMENT
OF ILLINOIS**

601 Madison Road
E. St. Louis, IL 62201
(618) 271-6788
(618) 271-1227 Fax

July 23, 2013

Illinois Environmental Protection Agency
Bureau of Air – Compliance Section #40
1021 North Grand Avenue East
Springfield, Ill 62702

163075AAL – St. Clair County
Cottonwood Hills Recycling and Disposal Facility

NSPS Semi-Annual Report for Period January 1, 2013 to June 30, 2013

Dear Sirs:

This letter transmits the NSPS Semi-Annual Report for the above referenced reporting period at the above referenced facility.

If you have any questions or require additional information, please call me at
(618) 857-7160 or (314) 568-2025.

Sincerely,
Waste Management of Illinois, Inc.

A handwritten signature in black ink, appearing to read 'Ernest H. Dennison'. The signature is fluid and cursive, with a large, stylized 'E' and 'D'.

Ernest H Dennison, PE
District Engineer

cc: IEPA – Collinsville Field Office
2009 Mall Street
Collinsville, Illinois 62234



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE

Revision #: _____
Date: ____ / ____ / ____
Page ____ of ____
Source Designation: _____

**COMPLIANCE AND GENERAL
REPORTING FORM****FOR AGENCY USE ONLY**

ID NUMBER: _____

PERMIT #: _____

DATE: _____

THIS FORM IS USED FOR EITHER OF THE FOLLOWING:

- TO REPORT AND CERTIFY COMPLIANCE OF AN ENTIRE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT WITH ALL APPLICABLE REQUIREMENTS DURING A REPORTING PERIOD, OR
- TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT. THIS FORM SHOULD BE USED AS THE COVER SHEET OF THE SUBMITTED REPORT.

SOURCE INFORMATION

1) SOURCE NAME:

Cottonwood Hills Recycling and Disposal Facility2) DATE FORM
PREPARED:**July 2013**3) SOURCE ID NO.
(IF KNOWN):**163075AAL****GENERAL INFORMATION**

4) INDICATE FOR WHICH OF THE FOLLOWING THIS FORM IS BEING COMPLETED:

☒ **TO REPORT AND CERTIFY COMPLIANCE OF THE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT
WITH ALL APPLICABLE REQUIREMENTS**☐ **TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT**

5) PERIOD COVERED BY THIS REPORT:

FROM: **01 / 01 / 2013**TO: **06 / 30 / 2013**

6) NAME AND PHONE NUMBER OF PERSON TO CONTACT FOR QUESTIONS REGARDING THIS REPORT:

NAME: **Ernest Dennison**TITLE: **District Engineer**PHONE#: (**618**) **857-7160** EXT: _____ or (**314**) **568-2025**

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

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COMPLIANCE OF SOURCE OR EQUIPMENT DURING REPORTING PERIOD

- COMPLETE ITEM 7 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF THE ENTIRE SOURCE.
- COMPLETE ITEM 8 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF SPECIFIC ITEMS OF EQUIPMENT ONLY.

7) WAS THE SOURCE IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD?



YES



NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 - "EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

8a) LIST THE EMISSION UNIT(S) AND CONTROL EQUIPMENT FOR WHICH THIS FORM IS BEING COMPLETED TO REPORT AND CERTIFY COMPLIANCE WITH (IF ADDITIONAL SPACE IS NEEDED FOR ITEM 10, ATTACH AND LABEL AS EXHIBIT 400-A):

See Attached Report.

b) IDENTIFY THE APPLICABLE REQUIREMENT(S) FOR WHICH THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE WITH:

See Attached Report.

c) IDENTIFY THE APPLICABLE REQUIREMENT(S) WHICH REQUIRE THAT THIS REPORT OR CERTIFICATION BE SUBMITTED:

Semi-Annual NSPS Report

d) WERE THE ABOVE REFERENCED ITEMS IN 8(a) IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD?



YES



NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 - "EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

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REPORT INFORMATION

9) TITLE OF REPORT BEING SUBMITTED:

NSPS Semi-Annual Report

10) IDENTIFY THE APPLICABLE REQUIREMENT(S) WHICH REQUIRES THIS REPORT (IF APPLICABLE):

40 CFR 60.757(f) NSPS

11) BRIEFLY EXPLAIN WHAT THIS REPORT COVERS:

This Semi-Annual NSPS Report is a summary of any exceedences of monitored parameters, periods of downtime for gas collection/control devices, and any expansions/modifications to the gas collection system.

12) ATTACH THE REPORT TO THIS FORM.

See Attached Report**SIGNATURE BLOCK**

NOTE: THIS CERTIFICATION MUST BE SIGNED BY A RESPONSIBLE OFFICIAL. APPLICATIONS WITHOUT A SIGNED CERTIFICATION WILL BE RETURNED AS INCOMPLETE.

13) I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION ARE TRUE, ACCURATE AND COMPLETE.

AUTHORIZED SIGNATURE:

BY:


AUTHORIZED SIGNATUREDISTRICT ENGINEER
TITLE OF SIGNATORYERNEST H DENNISON

TYPED OR PRINTED NAME OF SIGNATORY

7 / 23 / 13
DATE**APPLICATION PAGE**

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Page 3 of 3

WM01469



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL - PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE

Revision #: _____
Date: ____ / ____ / ____
Page ____ of ____
Source Designation: _____

**DELEGATION OF AUTHORITY
FOR RESPONSIBLE OFFICIAL
TO A REPRESENTATIVE**

FOR AGENCY USE ONLY

ID NUMBER: _____

PERMIT #: _____

DATE: _____

THIS FORM SHALL BE USED BY A RESPONSIBLE OFFICIAL TO DELEGATE AUTHORITY TO A REPRESENTATIVE OF SUCH PERSON FOR SIGNATURE ON APPLICATIONS OR CERTIFICATION OF REPORTS TO BE SUBMITTED PURSUANT TO THE CLEAN AIR ACT.

THIS FORM SHALL ONLY BE USED FOR A CORPORATION AT WHICH A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR ANY OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION TO TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO A REPRESENTATIVE OF SUCH PERSON. THE REPRESENTATIVE OF SUCH PERSON MUST BE RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.

NOTE: THIS TRANSFER OF DELEGATION OF AUTHORITY IS APPLICABLE ONLY IF THE FACILITY EMPLOYS MORE THAN 250 PERSONS OR HAS A GROSS ANNUAL SALES OR EXPENDITURES EXCEEDING \$25 MILLION (IN SECOND QUARTER 1980 DOLLARS).

SOURCE INFORMATION

1) SOURCE NAME: Cottonwood Hills Recycling and Disposal Facility

2) DATE FORM
PREPARED: 1/17/12

3) SOURCE ID NO.
(IF KNOWN): 163075AAL

TRANSFER OF AUTHORITY

4) I, THE UNDERSIGNED, BEING A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION, HEREBY TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO Ernest H. Dennison, THEY BEING A REPRESENTATIVE AND RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.

AUTHORIZED SIGNATURE

Vice President and Assistant Secretary

TITLE OF SIGNATORY

Dennis M. Wilt

TYPED OR PRINTED NAME OF SIGNATORY

1 / 17 / 12
DATE

Ernest H. Dennison

DELEGATED REPRESENTATIVE

District Engineer

TITLE OF DESIGNATED REPRESENTATIVE

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

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FOR APPLICANT'S USE

**COTTONWOOD HILLS
RECYCLING AND DISPOSAL FACILITY
NSPS SEMI-ANNUAL REPORT**

**For the Reporting Period
01/01/13 to 06/30/13**

**Prepared By
Waste Management of Illinois, Inc.**

July 2013

1.0 Introduction

This document consists of the semi-annual report for Cottonwood Hills Recycling and Disposal Facility in Marissa, Illinois and has been prepared in accordance with 40 CFR 60.757(f). This report covers the period of gas system operations from January 1, 2013 to June 30, 2013.

Documented in this report are exceedances of monitored parameters under 40 CFR 60.756, periods of downtime for gas collection/control devices, and any expansions/modifications to the gas collection system during the reporting period. The report is organized into three main sections: Collection systems, Control Devices and Landfill.

The gas collection system currently in place at the site consists of 22 vertical gas collection wells and temporary gas collection trenches. The wells and trenches are connected to the gas collection laterals and header pipe which leads to a 3000 scfm open flare (control device).

The gas mover equipment is comprised of a blower at the flare station.

2.0 Collection System Summary

2.1 Exceedance of Monitored Parameters

Gauge Pressure at each Gas Collection Wellhead (40 CFR 60.756 (a)(1))

- Report all instances of positive pressure measured at the gas collection header of each individual wellhead, including value and length of time measured.
- Per 40 CFR 60.753 (b), record instances when positive pressure occurred at a wellhead in an effort to avoid a landfill fire.

Based on a review of the data, any positive pressure exceedances which were detected had a corrective action (adjusted wellhead vacuum) initiated within 5 days and was fixed within 15 days, or have a variance request (approved or pending), or were replaced by a new replacement gas well. Therefore, these wells are considered to be in compliance (See Exceedence Report in Attachment 1).

Monthly Oxygen or Nitrogen Concentration at Each Gas Collection Wellhead (40 CFR 60.756(a)(2))

- Report all instances, on a per well basis, when nitrogen concentrations exceeded 20% or oxygen concentrations exceed 5%. Report date, value and length of time of each exceedance.

- Detail action taken within 5 days to correct exceedance. Report date that exceedance was corrected (must be less than 15 days).

Based on a review of the data, any oxygen reading in excess of the regulatory limits of 5% had a corrective action (adjusted wellhead vacuum) initiated within 5 days and was fixed within 15 days, or have a variance request (approved or pending), or were replaced by a new replacement gas well. Therefore, these wells are considered to be in compliance (See Exceedance Report in Attachment 1).

Temperature of the landfill gas at each wellhead (40 CFR 60.756(a)(3))

- Report all instances, on a per well basis, when landfill gas temperature exceeded 55°C (131°F).
- Detail action taken within 5 days to convert exceedance. Report date that exceedance was corrected (must be less than 15 days).

There were multiple instances of a temperature exceeding 131°F as measured at the wellhead during the reporting period (See Exceedance Report in Attachment 1). These wells have received USEPA approved temperature variances or have pending variance requests or were replaced with a new gas collection well (See Attachment 2 for variance submitted during this reporting period). Therefore, these wells are considered to be in compliance.

2.2 Record of Operation

Description and duration of all periods when the gas stream from the collection system was diverted from the control device through a bypass line (40 CFR 60.756(b)(2)) for enclosed flare, engines or turbines, or 40 CFR 60.756(c) for utility flares).

The gas collection system at Cottonwood Hills RDF does not have a bypass line. Therefore, there were no periods of time that flow was diverted through a bypass line. All flow was directed to the permitted control device (open flare).

Description and duration of all periods when the collection system was not operating for more than 5 days.

There was no period of time during which the collection system was not operating for more than 5 days during the reporting period.

2.3 Record of Expansion

Date and location of all newly installed wells or collection system expansion (40 CFR 60.757(f)(6)).

There were no new gas collection wells installed during the reporting period.

3.0 Control Device Summary

3.1 Monitored Parameters

Flare Flame (Utility Flare)

- Report all periods of flare flame absence (40 CFR 60.758(c)(4)).

The open flare at Cottonwood Hills RDF is equipped with a thermocouple to continuously determine that a flame is present via temperature. Upon loss of flame (drop in temperature), the thermocouple automatically shuts down the blower.

In addition, the blower inlet control valve is automatically closed to prevent uncontrolled discharge. The lack of a flame at the flare is not indicative of an emissions exceedance, since the system will not operate when a flame is not present.

Flow (Utility Flare)

- Report all periods during which the control device was not operating for more than one hour; report duration of each event (40 CFR 60.757(f)(3)).

A Table of periods when the control device (open flare) was not operating for more than one hour is provided in Attachment 3. No raw landfill gas was emitted through the control device during the downtime. Therefore, the control device did not allow emissions of raw landfill gas for more than one hour.

3.2 Performance Testing

Performance Test (Utility Flare)

- Complete initial/annual performance test on the open flare in accordance with IEPA-BOA Construction Permit application number 06100058.

The performance test for 2012 was submitted on December 12, 2012. The performance test for 2013 will be submitted this fall.

4.0 Landfill Summary

4.1 Monitored Parameters

Surface Scan

- Report the location of each exceedance of the 500 ppm methane concentration, and the concentration recorded at each exceedance location (40 CFR 60.757(f)(5)).

The quarterly methane surface scans were conducted at the facility as required. A Table of exceedances is provided in Attachment 4. Any exceedances were corrected and re-monitored within the required timeframes.

Semi-Annual Sampling/Analysis

- Perform semi-annual sampling and analysis of landfill gas entering the control system in accordance with IEPA-BOA application number 06100058.

Sampling and analysis of the landfill gas is conducted in conjunction with the performance test for the flare. The results are submitted with the flare performance test report.

ATTACHMENT 1

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
WELLHEAD PERFORMANCE COMPLIANCE AND CORRECTIVE ACTION
FOR JANUARY 1, 2013 to JUNE 30, 2013 REPORTING PERIOD

Well	Date	Temp	Pw	CH4%	CO2%	O2%	Date	Corrective Action	Temp	Pw	CH4%	CO2%	O2%	CO
MW08		Variance request was sent to USEPA on 01/24/12 for permanent temperature variance of 135 F												
MW08		Variance request was sent to USEPA on 09/06/12 for permanent temperature variance of 140 F												
MW08	01/28/13	135	-1.1	57.7	41.5	0.0	01/28/13	Wellhead Pw adjusted	135	-1.0				
MW08	02/20/13	133	-0.8	57.9	39.6	0.3	02/20/13	Wellhead Pw adjusted	133	-0.8				
MW08	03/22/13	135	-1.2	58.0	39.2	0.2	03/22/13	Wellhead Pw adjusted	135	-1.3				
MW08	04/09/13	136	-2.1	59.8	39.5	0.0	04/09/13	Wellhead Pw adjusted	136	-2.0				
MW08	05/02/13	138	-0.7	58.4	40.6	0.0	05/02/13	Wellhead Pw adjusted	138	-0.8				0
MW08		Variance request was sent to USEPA on 06/03/13 for permanent temperature variance of 145 F												
MW09R		Variance request was sent to USEPA on 09/06/12 for permanent temperature variance of 150 F												
MW09R	01/28/13	127	-0.3	46.0	39.4	0.4	01/28/13	Wellhead Pw adjusted	126	-0.3				
MW09R	02/20/13	125	-0.1	43.5	37.5	0.9	02/20/13	Wellhead Pw adjusted	125	-0.1				
MW09R	03/22/13	129	-0.3	44.4	39.9	0.1	03/22/13	Wellhead Pw adjusted	129	-0.4				
MW09R	04/09/13	133	-0.4	49.8	39.6	0.0	04/09/13	Wellhead Pw adjusted	132	-0.4				
MW09R	05/02/13	139	-0.1	56.2	40.8	0.0	05/02/13	Wellhead Pw adjusted	139	-0.2				
MW09R		Reiterate previous variance request for permanent temperature variance of 150 F on 06/03/13												
MW09R	06/20/13	124	-3.6	60.9	38.3	0.7	06/20/13	Wellhead Pw adjusted	124	-4.3				
MW10R		Variance request was sent to USEPA on 09/06/12 for permanent temperature variance of 145 F												
MW10R	01/28/13	137	-0.3	52.5	44.6	0.0	01/28/13	Wellhead Pw adjusted	137	-0.1				
MW10R	02/20/13	135	-0.2	51.3	42.1	0.2	02/20/13	Wellhead Pw adjusted	136	-0.2				
MW10R	03/22/13	137	-0.2	50.2	45.2	0.1	03/22/13	Wellhead Pw adjusted	136	-0.2				
MW10R	04/09/13	139	-0.2	50.5	43.6	0.0	04/09/13	Wellhead Pw adjusted	139	-0.2				
MW10R	05/02/13	122	1.1	53.5	41.7	0.0	05/02/13	Wellhead Pw adjusted	122	1.1				
MW10R		Reiterate previous variance request for permanent temperature variance of 145 F on 06/03/13												
MW10R	05/22/13	137	-0.6	54.4	42.0	0.0	05/22/13	Wellhead Pw adjusted	137	-0.6				
MW10R	06/20/13	128	-1.8	57.7	42.1	0.1	06/20/13	Wellhead Pw adjusted	128	-2.1				
MW17		Variance request was sent to USEPA on 09/12/12 for permanent temperature variance of 140 F												
MW17	01/17/13	141	-1.6	55.5	43.2	0.1	01/17/13	Wellhead Pw adjusted	139	-1.1				
MW17	02/22/13	140	-0.2	53.9	43.6	0.0	02/22/13	Wellhead Pw adjusted	139	-0.3				
MW17	03/22/13	141	-0.5	54.0	43.3	0.3	03/22/13	Wellhead Pw adjusted	142	-0.5				
MW17	04/09/13	145	-2.6	59.3	36.9	0.1	04/09/13	Wellhead Pw adjusted	145	-2.5				
MW17	05/02/13	144	-4.0	46.0	39.1	0.0	05/02/13	Wellhead Pw adjusted	145	-4.1				
MW17		Variance request was sent to USEPA on 06/03/13 for permanent temperature variance of 150 F												
MW17	06/20/13	139	-1.8	58.5	41.4	0.0	06/20/13	Wellhead Pw adjusted	139	-2.0				
MW19		Variance request was sent to USEPA on 09/06/12 for permanent temperature variance of 145 F												
MW19	01/28/13	140	-0.1	57.0	39.9	0.0	01/28/13	Wellhead Pw adjusted	140	-0.1				
MW19	02/22/13	139	-0.2	59.2	38.8	0.1	02/22/13	Wellhead Pw adjusted	138	-0.1				
MW19	03/15/13	142	-0.3	58.4	39.6	0.0	03/15/13	Wellhead Pw adjusted	142	-0.3				
MW19		Variance request was sent to USEPA on 06/03/13 for permanent temperature variance of 150 F												

Action shall be initiated to correct the exceedence within 5 calendar days. If correction of the exceedence can not be achieved within 15 calendar days of the first measurement, the gas system shall be expanded if temperature exceeds 55 Celcius, wellhead pressure Pw is positive, Nitrogen is 20% or above, or Oxygen is 5% or above.

ATTACHMENT 2

**COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
GAS WELL USEPA VARIANCE APPROVALS**

Gas Well	Approved Temp	USEPA Approval	Comments
MW07R	Temporary	06/24/10	Request 6 month approval of 145 F and O2 variance on 06/08/10 Approve 120 days from 06/02/10 to be below 131 F and O2 below 5%
			Requested permanent approval of 140 F and O2 of 10% on 08/06/10 Well Decommissioned
MW07R1	145 F Temporary	04/07/11	Requested permanent approval of 145 F on 02/25/11 Requested permanent approval of 145 F on 04/04/11 USEPA approved a temporary variance for 8 months on 04/07/11 Requested permanent approval of 140 F on 12/07/11 Requested permanent approval of 145 F on 09/06/12 Reiterate request for approval of 145F on 06/03/13
MW08			Requested permanent approval of 135 F on 01/24/12 Requested permanent approval of 140 F on 09/06/12 Requested permanent approval of 145 F on 06/03/13
MW09	149 F Temporary	04/10	Requested permanent approval of 150 F on 03/23/10 Temporary approval for 6 months
	Pressure/Temp	05/17/10	Notify high CO*, request well shutoff & pressure variance on 04/23/10 Approved temporary variances for 120 days from 04/12/10
	150 F	04/07/11	Requested permanent approval of 150 F on 08/06/10 Requested permanent approval of 154 F on 02/25/11 Requested permanent approval of 149 F on 04/04/11 Approved 150 F
			Requested permanent approval of 155 F on 05/20/11 Requested permanent approval of 160 F on 01/24/12
MW09R			Requested permanent approval of 150 F on 09/06/12 Reiterate request for approval of 150F on 06/03/13
MW10	Pressure/Temp	06/10/10	Requested approval of 140 F and positive pressure on 05/27/10 Approved temporary variances for 120 days from 05/14/10
	145 F	04/07/11	Requested permanent approval of 140 F on 08/06/10 Requested permanent approval of 147 F on 04/04/11 Approved 145 F
			Requested permanent approval of 150 F on 05/20/11 Requested permanent approval of 155 F on 01/24/12
MW10R			Requested permanent approval of 145 F on 09/06/12 Reiterate request for approval of 145F on 06/03/13
MW17			Requested permanent approval of 140 F on 09/12/12 Requested permanent approval of 150 F on 06/03/13
MW19			Requested permanent approval of 140 F on 05/20/11 Requested permanent approval of 145 F on 09/06/12 Requested permanent approval of 150 F on 06/03/13

* High CO was found to be from interference with tube reading ... Lab testing verified low CO



WASTE MANAGEMENT OF ILLINOIS, INC.

601 Madison Road
East St. Louis, Illinois 62201
(618) 271-6788
(618) 271-1227 Fax

June 3, 2013

Ms. Linda Rosen
USEPA (AE-17J) – Air & Radiation Division
Air Enforcement and Compliance Assurance Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

**Cottonwood Hills Recycling and Disposal Facility - Site I.D. No. 163075AAL
Request for Higher Operating Temperatures in Landfill Gas Extraction Wells
MW07R1, MW08, MW09/MW09R, MW10/MW10R, MW17, and MW19**

Dear Ms. Rosen:

This letter is written in response to your email requesting additional and updated information to the previously submitted temperature variance request dated September 6 and September 12, 2012.

MW07R1

The September 6, 2012 letter requested a permanent higher operating temperature of 145°F. Temperatures have been reduced since the request date by lowering vacuum on the well and due to winter months. In order to be able to increase vacuum during warmer summer months and maximize capture and control of landfill gas, **this letter reiterates the original request for a permanent higher operating temperature of 145°F in MW07R1.**

MW08

The September 6, 2012 letter requested a permanent higher operating temperature of 140°F. Vacuum on the well has been lowered but temperature still remain near 140°F. In order to be able to increase vacuum during warmer summer months and maximize capture and control of landfill gas, **this letter now requests a permanent higher operating temperature of 145°F in MW08.**

MW09 and MW09R

A higher operating temperature of 150 °F was approved by the USEPA for well MW09 on April 7, 2011. The September 6, 2012 letter requested a permanent higher operating temperature of 150°F for MW09R. A January 24, 2012 letter requested a permanent higher operating temperature of 160°F for MW09 (decommissioned). In order to be able to

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increase vacuum during warmer summer months and maximize capture and control of landfill gas, **this letter reiterates the original request for a permanent higher operating temperature of 150°F in well MW09R.**

MW10 and MW10R

A higher operating temperature of 145 °F was approved by the USEPA for well MW10 on April 7, 2011. The September 6, 2012 letter requested a permanent higher operating temperature of 145°F for MW10R. A January 24, 2012 letter requested a permanent higher operating temperature of 155°F for MW10 (decommissioned). In order to be able to increase vacuum during warmer summer months and maximize capture and control of landfill gas, **this letter reiterates the original request for a permanent higher operating temperature of 145°F in well MW10R.**

MW17

The September 12, 2012 letter requested a permanent higher operating temperature of 140°F. Adjusting vacuum on the well did not lower the temperature and temperatures have risen above 140°F without any evidence of subsurface oxidation as carbon monoxide remains low and there has been no smoke or subsidence in or around the well. In order to be able to increase vacuum during warmer summer months and maximize capture and control of landfill gas, **this letter now requests a permanent higher operating temperature of 150°F in MW17.**

MW19

The September 6, 2012 letter requested a permanent higher operating temperature of 145°F. Vacuum on the well has been lowered but temperature still remain above 140°F. In order to be able to increase vacuum during warmer summer months and maximize capture and control of landfill gas, **this letter now requests a permanent higher operating temperature of 150°F in MW19.**

SUMMARY

In order to properly operate the wells with a vacuum and to collect sufficient volumes of gas from the wells higher operating temperatures are needed. Typically a vacuum of at least 5 to 10 inches of water (and sometimes more depending on type of waste, well depth, etc) is generally needed to withdraw landfill gas from a well but is based on "tuning" a well to withdraw the maximum amount of gas without compromising the decomposition process and methane generation. The temperature can sometimes be reduced by lowering the well vacuum to a minimal amount (generally less than 0.5 inches of water) but this reduces the amount of landfill gas collected and can increase the possibility of landfill gas not being captured/controlled. Therefore, higher operating temperatures are needed in some wells for increased landfill gas capture/control so that they do not have to be operated at "barely open" or minimal vacuum.

We do not believe any of the elevated gas well temperatures are due to subsurface oxidation since there are no indications of fire, nor smoke, nor subsidence around the wells, nor elevated CO readings. There is also no reason to believe there are any structural

problems related to the operation of the wells with higher temperatures since oxygen levels in the wells are less than 5%.

If you require additional information, please call me at (618) 857-7160 or 314-568-2025.

Sincerely,
Waste Management of Illinois, Inc.

A handwritten signature in black ink, appearing to read "Ernest H. Dennison". The signature is fluid and cursive, with a large initial "E" and "D".

Ernest H. Dennison, PE.
District Engineer

Cc: IEPA-BOA-Compliance and Enforcement Section
1021 North Grand Avenue East
Springfield, Illinois 62702

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW19

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW19	04/05/11 13:56	47.0	33.3	0.1	-6.4	130	129	-6.3	56	56	
MW19	04/14/11 13:31	42.5	34.3	0	-6.2	130	128	-5.0	54	39	49
MW19	05/13/11 13:00	52.2	36.7	0.4	-4.1	135	134	-3.5	39	34	25
MW19	05/20/11 12:43	54.7	37.8	0.0	-1.8	134	132	-0.7	30	13	50
MW19	06/16/11 14:54	52.6	38.8	0.6	-0.8	132	132	-0.8	12	13	30
MW19	07/20/11 09:53	53.2	38.2	0.3	-0.8	135	135	-0.8	12	13	175
MW19	08/03/11 13:55	54.9	38.5	0.0	-1.0	133	134	-1.1	15	15	
MW19	08/11/11 15:03	55.2	37.0	0.5	-0.9	134	134	-0.8	15	13	75
MW19	09/08/11 14:56	52.0	38.5	0.2	-0.2	133	133	-0.2	11	12	100
MW19	10/07/11 11:23	54.0	39.2	0.1	-0.7	133	133	-0.8	13	13	50
MW19	11/03/11 09:59	53.0	40.5	0.0	-0.6	131	130	-0.6	12	12	
MW19	12/08/11 15:05	54.1	39.9	0.0	-0.9	131	131	-0.9	15	15	0
MW19	12/15/11 12:00	52.6	39.0	0.1	-2.1	131	135	-11.6	16	121	
MW19	12/15/11 14:11	50.5	39.1	0.2	-17.5	137	136	-17.5	102	102	
MW19	12/16/11 15:56	43.2	35.3	0.3	-18.3	138	137	-13.9	99	49	0
MW19	01/27/12 12:10	42.5	32.3	0.9	-8.1	137	135	-6.0	47	24	
MW19	02/22/12 12:35	50.6	37.4	0.0	-2.4	137	136	-2.0	26	22	
MW19	03/09/12 11:37	51.6	38.4	0.2	-2.4	135	134	-1.8	18	11	
MW19	04/18/12 12:10	54.9	39.7	0.0	-0.2	136	137	-1.7	13	34	25
MW19	05/17/12 10:54	49.7	36.5	0.1	-5.5	138	138	-5.0	40	33	
MW19	06/20/12 15:05	45.8	37.1	0.0	-3.9	134	135	-3.9	26	27	
MW19	07/19/12 08:42	44.5	35.8	0.0	-4.8	141	139	-3.8	30	17	
MW19	08/10/12 14:00	51.5	39.7	0.0	-2.3	140	138	-1.8	14	8	40
MW19	09/24/12 09:06										30
MW19	09/24/12 13:39	51.5	39.8	0.1	-0.2	135	135	-0.2	8	8	
MW19	10/08/2012 12:45	54.3	38.7	0.0	-0.2	136	136	-0.2	5	6	
MW19	11/01/12 09:58	54.5	39.7	0.0	-0.2	133	133	-0.2	10	13	
MW19	12/11/12 15:16	59.4	38.6	0.3	-1.6	138	137	-1.5	16	16	
MW19	01/28/13 13:40	57.0	39.9	0.0	-0.1	140	140	-0.1	21	22	
MW19	02/22/13 11:49	59.2	38.8	0.1	-0.2	139	138	-0.1	19	19	
MW19	03/15/13 13:34	58.4	39.6	0.0	-0.3	142	142	-0.3	48	48	

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW07R1

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW07R1	01/07/11 12:42	55.1	39.8	0	-1.2	129	130	-1.7	11	16	
MW07R1	02/15/11 14:13	50.5	37.6	0.2	-3	145	139	-0.7	16	9	< 100
MW07R1	02/23/11 11:33	46.2	36.7	0	-1.1	132	133	-1.1	4	5	
MW07R1	03/04/11 11:35	54.1	38.7	0.4	-0.8	126	126	-0.8	4	6	
MW07R1	04/05/11 10:17	44.8	34.2	0.4	-4.1	126	122	-3.8	6	5	
MW07R1	04/07/11 09:50					145	145				
MW07R1	04/14/11 01:44	50.6	36.3	0	-0.9	125	126	-1.1		8	150
MW07R1	05/13/11 12:46	50.8	36.5	0.2	-2	137	137	-2.1	5	5	
MW07R1	06/16/11 02:09	51.4	37.8	0.5	-0.8	114	116	-1	3	4	
MW07R1	07/20/11 09:18	54.3	37.2	0.3	-1.3	126	131	-0.9	3	6	
MW07R1	08/03/11 10:58	55.4	36.8	0.1	-0.2	113	118	-0.7	9	9	
MW07R1	09/08/11 02:12	49.1	37.4	0.1	-2.3	140	138	-2	5	5	50
MW07R1	10/07/11 10:36	54.2	37.6	0	-0.5	132	132	-0.5	2	3	25
MW07R1	11/03/11 09:50	52.7	39.6	0.1	-0.8	120	132	-1	10	10	
MW07R1	12/08/11 14:04	54.7	40.0	0.0	-2.8	139	138	-2.9	7	6	0
MW07R1	01/27/12 12:21	45.5	35.1	1.2	-7.4	136	135	-7.4	11	12	
MW07R1	02/22/12 12:15	45.1	35.6	0.9	-3.7	138	138	-3.2	8	5	
MW07R1	03/09/12 08:26	46.7	34.6	0.5	-3.7	116	116	-3.8	3	4	
MW07R1	04/18/12 09:18	51.4	38.3	0.0	-1.4	125	124	-1.4	16	17	
MW07R1	05/15/12 11:53	50.9	37.7	0.0	-2.1	130	131	-2.1	2	2	
MW07R1	06/08/12 09:43	50.6	35.5	0.0	-1.6	131	131	-1.6	5	3	
MW07R1	07/26/12 11:52	50.6	33.8	1.7	-3.4	101	104	-3.5	11	11	
MW07R1	08/10/12 12:52	53.6	39.6	0.0	-5.4	135	135	-5.5	2	3	
MW07R1	09/20/12 11:35	48.5	36.7	1.3	-4.6	135	132	-4.4	10	10	
MW07R1	10/08/12 11:56	54.6	39.9	0.0	-1.7	107	108	-1.6	6	6	
MW07R1	11/01/12 08:23	54.4	39.9	0.1	-3.6	110	113	-3.6	3	5	
MW07R1	12/11/12 13:32	54.4	40.6	0.0	-6.4	113	127	-7.0	5	5	
MW07R1	01/28/13 12:37	54.8	40.1	0.1	-6.6	132	131	-6.7	2	5	
MW07R1	02/20/13 14:26	40.2	35.1	2.6	-7.0	123	123	-6.4	3	0	
MW07R1	03/22/13 09:27	53.1	40.6	0.0	-1.9	89	89	-1.9	0	4	
MW07R1	04/09/13 09:08	53.8	40.5	0.0	-2.5	102	103	-2.4	3	4	
MW07R1	05/02/13 12:53	54.4	41.3	0.0	-3.2	112	112	-3.2	3	3	

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW08

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW08	09/08/11	57.6	39.7	0.0	-0.1	134	133	-0.4	25	27	75
MW08	10/07/11	57.1	39.5	0.0	-2.5	132	132	-3.9	33	61	20
MW08	11/03/11	46.4	38.5	0.1	-6.8	132	131	-6.5	64	62	
MW08	11/10/11	50.3	37.0	0.0	-5.8	130	130	-5.7	55	55	
MW08	12/08/11	59.4	39.8	0.0	-5.5	131	131	-8.1	55	93	0
MW08	01/26/12 10:31	45.0	35.8	0.0	-14.2	132	130	-10.3	94	24	
MW08	02/23/12 10:11	58.7	38.8	0.0	-1.0	132	130	-0.7	25	18	
MW08	03/09/12 08:43	59.7	37.2	0.0	-2.2	127	127	-2.3	18	18	
MW08	04/18/12 09:36	61.0	38.8	0.0	-0.6	138	139	-1.7	53	62	25
MW08	04/27/12 11:32	55.2	41.1	0.0	-7.0	134	134	-4.2	75	30	
MW08	05/15/12 12:12	59.4	39.4	0.0	-2.4	136	136	-2.3	32	30	
MW08	06/20/12 14:33	58.5	41.4	0.0	-1.5	132	132	-1.8	25	33	
MW08	07/19/12 07:44	57.8	39.9	0.0	-3.5	136	136	-2.9	36	26	
MW08	08/10/12 13:16	58.4	39.5	0.0	-1.1	137	138	-0.9	22	20	25
MW08	09/24/12 09:03										25
MW08	09/24/12 13:13	56.9	39.9	0.0	-0.1	135	135	0.0	16	17	
MW08	10/08/12 12:17	59.9	39.1	0.0	-0.2	137	137	-0.6	18	26	
MW08	11/01/12 08:48	59.0	40.8	0.1	-1.9	133	133	-1.9	25	22	
MW08	12/11/12 14:01	58.7	41.2	0.0	-1.7	135	134	-1.6	24	23	
MW08	01/28/13 12:56	57.7	41.5	0.0	-1.1	135	135	-1.0	26	25	
MW08	02/20/13 14:55	57.9	39.6	0.3	-0.8	133	133	-0.8	19	19	
MW08	03/22/13 10:05	58.0	39.2	0.2	-1.2	135	135	-1.3	17	18	
MW08	04/09/13 09:33	59.8	39.5	0.0	-2.1	136	136	-2.0	14	14	
MW08	05/02/13 13:24	58.4	40.6	0.0	-0.7	138	138	-0.8	26	26	
MW08	05/03/13 11:40										0

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW09

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW09	09/21/10	47.2	40.6	0.0	-2.0	140	142	-2.1	10	7	
MW09	10/13/10	51.3	40.8	0.0	-4.7	143	143	-4.7	15	15	<100
MW09	11/08/10	50.8	39.8	0.0	-4.5	140	138	-4.5	39	38	
MW09	12/06/10	50.8	39.5	0.2	-4.5	142	141	-4.4	8	5	
MW09	01/07/11	51.9	38.9	0.0	-4.9	139	138	-7.0	18	38	
MW09	02/15/11	50.7	40.2	0.0	-9.4	154	149	-2.5	51	10	<100
MW09	02/23/11	48.9	40.4	0.0	-0.9	147	147	-0.9	11	4	
MW09	03/04/11	47.5	39.2	0.2	-1.1	140	141	-1.1	5	4	
MW09	04/05/11	49.4	40.2	0.0	-3.6	140	139	-3.5	8	8	
MW09	04/07/11	USEPA approved permanent temperature variance of 150 F on 04/07/11									
MW09	04/14/11	50.0	40.8	0.0	-2.3	144	144	-2.3	11	11	<100
MW09	05/13/11	49.4	40.7	0.2	-2.0	152	151	-2.0	9	10	25
MW09	05/20/11	Variance request was sent to USEPA on 05/20/11 for permanent temperature variance of 155 F									
MW09	07/20/11	44.4	41.0	0.3	-0.5	151	150	-0.5	4	3	75
MW09	08/03/11	45.3	40.3	0.2	-1.6	152	151	-1.4	7	4	
MW09	08/11/11	42.3	40.5	0.3	-0.6	149	149	-0.4	8	5	100
MW09	09/08/11	30.6	42.6	0.0	-2.3	149	149	-1.9	5	5	75
MW09	10/07/11	44.0	39.8	0.0	-2.0	152	147	-1.5	10	6	20
MW09	11/03/11	45.0	44.9	0.0	-2.2	148	145	-2.2	20	20	
MW09	12/08/11	47.3	40.6	0.0	-2.7	153	152	-2.4	8	7	0
MW09	12/15/11	45.9	41.9	0.1	-3.3	148	157	-17.5	15	103	0
MW09	12/15/11	43.1	40.9	0.5	-25.4	158	158	-25.4	76	76	
MW09	12/16/11	45.4	39.7	0.6	-26.3	158	155	-21.2	71	38	
MW09	01/12/2012 10:36	47.5	39.2	0.0	-7.9	144	144	-7.3	16	11	
MW09	01/27/2012 12:15	46.1	38.3	0.9	-5.8	152	148	-5.2	10	8	
MW09	02/22/2012 12:24	43.7	38.7	0.0	-0.3	148	147	-0.2	7	3	
MW09	03/12/2012 12:46	40.9	40.9	0.2	-2.4	117	119	-2.4	7	7	
MW09	04/18/2012 09:23	6.7	17.9	13.4	-0.6	88	89	-0.4	45	40	
MW09	04/27/2012 11:38	7.8	14.9	15.6	-0.1	85	85	-0.2	46	45	
MW09	05/15/2012 11:57	6.9	13.3	14.4	-0.7	93	93	-0.2	36	21	
MW09	06/20/2012 12:09	18.1	33.4	5.9	-0.1	100	100	-0.1	11	7	
MW09	07/19/2012 07:33	18.2	28.9	6.9	-0.3	111	111	-0.2			
MW09	08/10/2012 12:56	23.1	30.5	6.2	-0.1	113	112	0.0	13	13	

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW09R

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW09R	09/20/12 10:17	55.4	43.6	0.1	-3.0	129	129	-3.0	68	68	
MW09R	10/08/12 11:52	31.3	30.2	2.4	-3.4	129	124	-1.7	68	30	
MW09R	11/01/12 08:31	43.4	39.5	0.7	-1.3	125	126	-1.1	13	9	
MW09R	12/11/12 13:45	37.6	34.6	2.2	-0.7	124	124	-0.6	27	24	
MW09R	01/28/13 12:44	46.0	39.4	0.4	-0.3	127	126	-0.3	21	21	
MW09R	02/20/13 14:36	43.5	37.5	0.9	-0.1	125	125	-0.1	11	12	
MW09R	03/22/13 09:36	44.4	39.9	0.1	-0.3	129	129	-0.4	26	26	
MW09R	04/09/13 09:19	49.8	39.6	0.0	-0.4	133	132	-0.4	19	19	
MW09R	05/02/13 13:03	56.2	40.8	0.0	-0.1	139	139	-0.2	26	27	
MW09R	05/03/13 11:41										0

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW10

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW10	08/05/10	56.9	41.6	0.0	-0.9	137	138	-1.0	8	11	
MW10	08/19/10	55.5	42.9	0.0	-2.0	142	140	-1.5	17	12	2000*
MW10	09/21/10	53.3	39.3	0.1	-0.3	138	139	-0.9	18	30	
MW10	10/13/10	57.6	42.1	0.0	-3.7	140	139	-6.0	27	51	< 100 **
MW10	11/08/10	55.0	40.3	0.0	-10.5	139	139	-11.5	56	64	
MW10	12/06/10	54.4	40.2	0.1	-14.6	140	140	-17.8	69	96	
MW10	01/07/11	50.6	39.1	0.0	-21.2	139	139	-21.7	88	90	
MW10	02/15/11	53.0	40.7	0.0	-22.0	147	142	-10.5	94	11	< 100 **
MW10	02/23/11	56.3	42.2	0.0	-0.3	142	143	-0.3	31	32	
MW10	03/04/11	54.5	42.2	0.2	-0.5	136	136	-0.5	3	3	
MW10	04/05/11	54.8	42.6	0.1	-3.3	136	136	-3.3	15	15	
MW10	04/07/11	USEPA approved permanent temperature variance of 145 F on 04/07/11									
MW10	04/14/11	51.0	41.5	0.0	-2.0	141	140	-3.0	14	15	< 100
MW10	05/13/11	49.4	41.1	0.4	-1.8	147	146	-1.8	15	15	25
MW10	05/20/11	Variance request was sent to USEPA on 05/20/11 for permanent temperature variance of 150 F									
MW10	07/20/11	50.7	43	0.2	-0.1	143	142	0.0	3	4	100
MW10	07/29/11	50.4	43.2	0.2	-0.2	144	146	-0.3	26	25	
MW10	08/03/11	51.8	41.5	0.3	-1.4	149	149	-1.4	10	13	
MW10	08/11/11	50.6	41.2	0.4	-1.0	149	147	-0.5	10	8	100
MW10	08/24/11	48.8	42.7	0.4	-0.5	147	149	-0.5	19	17	125
MW10	09/08/11	49.3	43.6	0.1	-0.8	149	149	-0.7	12	11	75
MW10	10/07/11	52.3	40.5	0.3	-1.1	147	145	-0.8	9	8	50
MW10	11/03/11	49.3	44.5	0.1	-0.9	142	142	-1.0	12	8	
MW10	12/08/11	52.2	43.3	0.0	-1.9	148	147	-2.0	13	14	0
MW10	12/15/11	50.6	43.3	0.2	-4.2	145	154	-21.7	20	140	
MW10	12/15/11	47.7	41.8	0.5	-27.0	155	154	-27.0	102	103	
MW10	12/16/11	46.7	39.6	0.8	-28.4	154	153	-24.7	90	69	0
MW10	01/26/2012 10:43	45.8	39	0	-13	153	147	-8.6	43	10	
MW10	02/22/2012 12:45	46.1	40.6	0	-1	148	148	-0.8	12	11	
MW10	03/09/2012 08:34	51.4	43.1	0.4	-4	138	128	-4.2	17	19	
MW10	04/12/2012 12:40	47.8	44.7	0.1	-3.2	148	148	-2.3	21	15	
MW10	05/15/2012 12:02	50.3	42.4	0	-4.4	149	149	-4.4	10	8	
MW10	06/20/2012 13:45	51.8	44.8	0	-4.2	146	146	-4.2	12	18	
MW10	07/19/2012 09:13	48.1	44.8	0.1	-2.9	138	138	-2.4	19	17	
MW10	08/10/2012 13:00	45.7	45.5	0.1	-1.4	143	143	-1.4	2	5	25

WM01488

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW10R

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW10R	09/20/12 10:25	54.5	42.3	0.0	-1.3	143	143	-1.3	51	52	
MW10R	09/24/12 08:48										20
MW10R	10/03/12 14:16	40.2	42.8	0.1	-2.1	134	135	-1.2	57	25	
MW10R	11/01/12 08:38	49.3	46.6	0.0	-0.6	132	132	-0.6	25	25	
MW10R	12/11/12 13:50	53.6	45.6	0.1	-0.3	134	133	-0.3	13	13	
MW10R	01/28/13 12:48	52.5	44.6	0.0	-0.3	137	137	-0.1	10	1	
MW10R	02/20/13 14:40	51.3	42.1	0.2	-0.2	135	136	-0.2			
MW10R	03/22/13 09:43	50.2	45.2	0.1	-0.2	137	136	-0.2	7	8	
MW10R	04/09/13 09:24	50.5	43.6	0.0	-0.2	139	139	-0.2			
MW10R	05/02/13 13:16	53.5	41.7	0.0	1.1	122	122	1.1	5	7	
MW10R	05/03/13 11:42										50

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW17

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW17	02/23/12 11:04	54.4	43.3	0	-5.5	127	127	-5.5	136	138	
MW17	03/09/12 09:14	46.6	36.7	0.1	-6.8	127	127	-6.8	123	122	
MW17	04/18/12 11:39	48.5	40.5	0	-7.9	130	129	-8	125	124	
MW17	05/15/12 12:31	43.6	37.2	0	-9.3	130	130	-8	128	108	
MW17	06/20/12 14:09	41.4	37.5	0	-10	129	129	-6.3	120	62	
MW17	07/19/12 08:03	45.9	40.4	0	-4.5	135	136	-4.1	72	65	
MW17	07/24/12 10:15	44.9	39	0	-4.1	135	135	-4.1	68	67	50
MW17	08/10/12 13:31	46.3	38.2	0.1	-4.3	137	136	-3.9	65	59	30
MW17	09/24/12 09:05										20
MW17	09/24/12 13:27	48.4	41.1	0.0	-3.8	136	136	-3.4	59	53	
MW17	10/03/12 14:56	50.0	40.4	0.0	-2.9	138	138	-1.8	39	7	
MW17	11/01/12 09:17	54.5	44.5	0.0	-1.3	136	136	-1.3	33	31	
MW17	12/11/12 14:37	55.3	43.0	0.1	-1.3	139	139	-1.3	26	24	
MW17	01/17/13 14:06	55.5	43.2	0.1	-1.6	141	139	-1.1	29	21	
MW17	02/22/13 11:27	53.9	43.6	0.0	-0.2	140	139	-0.3			
MW17	03/22/13 10:30	54.0	43.3	0.3	-0.5	141	142	-0.5	7	5	
MW17	04/09/13 10:14	59.3	36.9	0.1	-2.6	145	145	-2.5	44	50	
MW17	05/02/13 13:42	46.0	39.1	0.0	-4.0	144	145	-4.1	46	46	
MW17	05/03/13 11:41										50

ATTACHMENT 3

**COTTONWOOD HILLS GAS COLLECTION SYSTEM
REPORTING FOR NON OPERATING PERIODS OF CONTROL DEVICE
3000 SCFM OPEN FLARE**

Date	Time	Description of Outage	Time Back In Service	Down Time Hours	Performed By
03/06/13	3:06 PM	Water in K.O.	03/07/13 @ 1:32 PM	22.4	DY
03/17/13	10:22 PM	Weather/Utility	03/18/13 @ 9:20 AM	11.0	DY
03/29/13	1:56 PM	Well Maintance	03/29/13 @ 3:24 PM	1.5	DY
04/08/13	3:38 PM	Maintance on Blower	04/08/13 @ 5:08 PM	1.5	DY
04/15/13	9:44 AM	Maintance on Blower	04/18/13 @ 3:40 PM	77.9	DY
05/17/13	8:10 AM	Maintance on Blower	05/17/13 @ 2:36 PM	6.4	DY
05/20/13	9:48 AM	Maintance on wellfield	05/20/13 @ 1:04 PM	3.3	DY
05/20/13	3:18 PM	Maintance on wellfield	05/20/13 @ 4:40 PM	1.4	DY
05/21/13	8:16 AM	New Condensate Pump	05/21/13 @ 3:56 PM	7.7	DY
05/26/13	6:18 AM	Maintance on wellfield	05/26/13 @ 7:32 AM	1.2	DY
05/27/13	4:02 AM	Blower vibration sensor installed	05/28/13 @ 10:10 AM	30.1	DY
05/29/13	3:52 AM	Condensate pump down	05/29/13 @ 11:14 AM	7.4	DY
05/30/13	7:16 PM	Condensate pump down	05/31/13 @ 1:24 AM	6.1	DY
06/11/13	1:10 AM	Chart recorder was swapped out.	06/12/13 @ 1:10 AM	24.0	MM
06/19/13	1:22 AM	Condensate pump High Level Alarm	06/19/13 @ 5:34 AM	4.2	MM
06/20/13	2:18 PM	Header change out between KOP and Blower.	06/20/13 @ 3:30 AM	1.2	MM
06/22/13	10:30 PM	Power Shut down by Ameren.	06/23/13 @ 8:34 AM	10.1	MM
06/23/13	9:48 AM	Condensate pump High Level Alarm	06/23/13 @ 11:12 AM	1.4	MM
06/24/13	1:34 AM	Utility Power Outage	06/24/13 @ 2:40 AM	1.1	MM
06/24/13	10:10 AM	Contractor failed to start chart recorder after progr	06/27/13 @ 10:28 AM	72.3	MM
TOTAL				292.2	

Per Sec. 60.757 : "Each owner or operator...shall include the following information with the annual report... description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating."

Verified by :

Doug Yearian	Gas Technician
Mike McElvain	Gas Technician
Scott Armstrong	Gas Technician

ATTACHMENT 4

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
 QUARTERLY SURFACE SCAN MONITORING EXCEEDENCES
 FOR JANUARY 1, 2013 TO JUNE 30, 2013 REPORT PERIOD

Quarter	Date	Location		Methane Conc ppm	Corrective Action	Date	Methane Conc ppm	Additional Corrective Action	Date	Methane Conc ppm
		North	West							
1st	03/15/13			All < 500	None Required			NA		
2nd	06/20/13			All < 500	None Required			NA		